AWIPS Technical Note
5.0 -1

Adding Combined Attribute Table Data to Composite Reflectivity Products

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AWIPS Build 5.0 adds the capability to view the Combined Attribute Table product (formerly only viewable on the PUP), along with several other radar enhancements. Unfortunately, most offices have made local modifications to either alter the menu displays or to allow localized default color schemes (such as the PUP tables). As a result, the Build 5.0 changes are not viewable by most sites.

The following steps will allow you to keep your office's radar menu and/or default color schemes as well as import the Build 5.0 radar enhancements.

1.) Close all D2D sessions and open a telnet user as fxa (or as root and su - fxa)

2.) You want to first check which files you may have already localized:

      A.) Type: **cd /awips/fxa/data/localization/XXX (where XXX is your siteID)**

      B.) Look for any of the following files and make note (these are files you have localized). When you run localization, AWIPS check for files in this directory FIRST before using

      the Build 5.0 defaults contained in /data/fxa/nationalData.

      ___   XXX-radarDepictKeys.template
      ___   XXX-radarDataMenus.template
      ___   XXX-radarMultiLoadInfo.template
      ___   XXX-radarProductButtonInfo.template

      C.) Type: **cd /data/fxa/nationalData**

      For the rest of the files that you did *NOT* have checked in part B, you're going to copy the AWIPS default versions to your localization directory. The purpose of this is so that your localization will not be overwritten in any future builds.

(Continued...)
For each file that you did *NOT* have checked in part B, perform the following:

For example: **cp radarProductButtonInfo.template /awips/fxa/data/localization/XXX/XXX-radarProductButtonInfo.template**

3.) Using your text editor of choice (I prefer the graphical editor in /usr/dt/bin/dtpad), you will need to modify each of these 4 files as necessary.

A.) To return to your localization directory, type:
cd /awips/fxa/data/localization/XXX (again, where XXX is your site ID)

4.) **MODIFYING XXX-radarDepictKeys.template**

This file contains all the data related to each radar product (colors, brightness, image/graphic, etc...), and stores that data to a unique "key". You will need to add/modify any keys that were changed from Build 4.3.x to Build 5.0. If you copied the radarDepictKeys from the /data/fxa/nationalData directory (Part 2C), you may **skip to part 4C**.

A.) First you're going to add the Combined Attribute Tables, as well as the 1 and 4km resolution Composite Reflectivity and Comp. Reflectivity Contour Products (now available under the derived menu).

Simply add the following lines of text somewhere in the XXX-radarDepictKeys.template file: (one line per entry). Note the entry of 49,100...this means color table #49 (found in **/awips/fxa/data/colorMaps.mark**), or OSF 16 Level Composite Reflectivity, with brightness of 100%. Note also that 0 is the NUMBER ZERO henceforth.

```
11970 | 0 |            |  |0 |0  |@@@@ Comp Refl            |@@@@ CZ 1km         |1 |0 |1 | 49,100
11980 | 0 |            |  |0 |0  |@@@@ Comp Refl            |@@@@ CZ 4km         |1 |0 |1 | 49,100
10970 | 0 |            |  |  |   |@@@@ Comb Att Table fm CZ  |@@@@ CZ Cat 1km   |1 |0 |1 |
10980 | 0 |            |  |  |   |@@@@ Comb Att Table fm CZ  |@@@@ CZ Cat 4km   |1 |0 |1 |
10941 |34|10526       |  |0 |1  |@@@@ Comp Refl Contour Page 1 |@@@@ CZC 1km Pg 1 |1 |0 |1 |#FF00FF |1
10942 |34|10526       |  |0 |1  |@@@@ Comp Refl Contour Page 2 |@@@@ CZC 1km Pg 2 |1 |0 |1 |#FF00FF |2
10943 |34|10526       |  |0 |1  |@@@@ Comp Refl Contour Page 3 |@@@@ CZC 1km Pg 3 |1 |0 |1 |#FF00FF |3
10944 |34|10526       |  |0 |1  |@@@@ Comp Refl Contour Page 4 |@@@@ CZC 1km Pg 4 |1 |0 |1 |#FF00FF |4
10945 |34|10526       |  |0 |1  |@@@@ Comp Refl Contour Page 5 |@@@@ CZC 1km Pg 5 |1 |0 |1 |#FF00FF |5
10946 |34|10526       |  |0 |1  |@@@@ Comp Refl Contour Page 6 |@@@@ CZC 1km Pg 6 |1 |0 |1 |#FF00FF |6
10961 |34|10527       |  |0 |1  |@@@@ Comp Refl Contour Page 1 |@@@@ CZC 4km Pg 1 |1 |0 |1 |#FF00FF |1
10962 |34|10527       |  |0 |1  |@@@@ Comp Refl Contour Page 2 |@@@@ CZC 4km Pg 2 |1 |0 |1 |#FF00FF |2
10963 |34|10527       |  |0 |1  |@@@@ Comp Refl Contour Page 3 |@@@@ CZC 4km Pg 3 |1 |0 |1 |#FF00FF |3
10964 |34|10527       |  |0 |1  |@@@@ Comp Refl Contour Page 4 |@@@@ CZC 4km Pg 4 |1 |0 |1 |#FF00FF |4
10965 |34|10527       |  |0 |1  |@@@@ Comp Refl Contour Page 5 |@@@@ CZC 4km Pg 5 |1 |0 |1 |#FF00FF |5
10966 |34|10527       |  |0 |1  |@@@@ Comp Refl Contour Page 6 |@@@@ CZC 4km Pg 6 |1 |0 |1 |#FF00FF |6
10971 |34|10502       |  |0 |1  |@@@@ Comb Att Table Page 1    |@@@@ CZ 1km Pg 1  |1 |0 |1 |#FFFFFF |1
10972 |34|10502       |  |0 |1  |@@@@ Comb Att Table Page 2    |@@@@ CZ 1km Pg 2  |1 |0 |1 |#FFFFFF |2
10973 |34|10502       |  |0 |1  |@@@@ Comb Att Table Page 3    |@@@@ CZ 1km Pg 3  |1 |0 |1 |#FFFFFF |3
```

```
10974 |34|10502    |   |0 |1  |@@@@ Comb Att Table Page 4      |@@@@ CZ 1km Pg 4  |1 |0 |1 |#FFFFFF |4
10975 |34|10502    |   |0 |1  |@@@@ Comb Att Table Page 5      |@@@@ CZ 1km Pg 5  |1 |0 |1 |#FFFFFF |5
10976 |34|10502    |   |0 |1  |@@@@ Comb Att Table Page 6      |@@@@ CZ 1km Pg 6  |1 |0 |1 |#FFFFFF |6
10981 |34|10503    |   |0 |1  |@@@@ Comb Att Table Page 1      |@@@@ CZ 4km Pg 1  |1 |0 |1 |#FFFFFF |1
10982 |34|10503    |   |0 |1  |@@@@ Comb Att Table Page 2      |@@@@ CZ 4km Pg 2  |1 |0 |1 |#FFFFFF |2
10983 |34|10503    |   |0 |1  |@@@@ Comb Att Table Page 3      |@@@@ CZ 4km Pg 3  |1 |0 |1 |#FFFFFF |3
10984 |34|10503    |   |0 |1  |@@@@ Comb Att Table Page 4      |@@@@ CZ 4km Pg 4  |1 |0 |1 |#FFFFFF |4
10985 |34|10503    |   |0 |1  |@@@@ Comb Att Table Page 5      |@@@@ CZ 4km Pg 5  |1 |0 |1 |#FFFFFF |5
10986 |34|10503    |   |0 |1  |@@@@ Comb Att Table Page 6      |@@@@ CZ 4km Pg 6  |1 |0 |1 |#FFFFFF |6
```

B.) Secondly, you're going to make some display changes to the Clutter Filter Control product and the Hybrid Scan Reflectivity product.

Look for the keys (first column) 10570 (Hybrid Scan) and 10572 (Clutter) and make them look like the following

```
10570 |11|10570,12115,12060    |   |0 |0  |@@@@ Hybrid Scan Refl (dBZ)  |@@@@ DHR |8 |0 |1 |@H@
```

```
10572 |11|10572,12115,12060    |   |0 |0  |@@@@ Clutter Filter Control ()  |@@@@ CFC  |8 |0 |1 |56
```

C.) I have made modifications to allow the combined attribute table to display along with the "composite" 1 & 4km Composite Reflectivity product (the first item under your kxxx radar menu - Composite Ref (CZ)).

Simply add the following line somewhere in the file:

```
11981 |0 |                      |   |0 |0 |@@@@ Composite Refl (dBZ) |@@@@ Comp Refl 1/4km |1 |0 |1 |49,100
```

5.) MODIFYING XXX-radarMultiLoadInfo.template

In order to display the combined attribute table (a graphic) on top of the 1/4km composite reflectivity product (an image), you will need to generate a multi-load product.

A.) Using the key 11981 that you made in part 4C, you must now tell AWIPS which products to load. Somewhere in the radarMultiLoadInfo, add the following line:

```
11981 |0 |0 |  |1 |*10705, *10971, 10972, 10973, 10974, 10975, 10976|@@@@ Comp Refl 1/4km
```

Key 10705 is the 1/4km composite reflectivity, and 10971-10976 are 6 pages of attribute tables. The asterisks mean products which are loaded as default (the comp. ref and the 1st table). If you do not want 6 pages of tables listed, simply remove 10976, 10975, etc...

B.) Also, make sure that the rest of the Build 5.0 multiload products are present in this file. If you copied this file from /data/fxa/nationalData/ then you may skip this part.

```
10526 |0 |0 |  |1 |*10941, 10942, 10943, 10944, 10945, 10946|@@@@ CZC 1km
10527 |0 |0 |  |1 |*10961, 10962, 10963, 10964, 10965, 10966|@@@@ CZC 4km
10970 |0 |0 |  |1 |*10971, 10972, 10973, 10974, 10975, 10976|@@@@ CZ Cat 1km
10980 |0 |0 |  |1 |*10981, 10982, 10983, 10984, 10985, 10986|@@@@ CZ Cat 4km
11970 |0 |0 |  |1 |*10502, *10971, 10972, 10973, 10974, 10975, 10976|@@@@ CZ Cat 1km
11980 |0 |0 |  |1 |*10503, *10981, 10982, 10983, 10984, 10985, 10986|@@@@ CZ Cat 4km
```

6.) MODIFYING XXX-radarProductButtonInfo.template

This file contains a list of all the clickable menu items in your kxxx radar pull down menu.

Therefore, you must add our new 1/4km composite reflectivity product w/ attribute tables here as well. FYI, the third column contains the exact wording of how the menu will look.

A.) Using the key 11981 that you made in part 4C, you must now tell AWIPS which key to associate that menu click with. Somewhere in the radarProductButtonInfo, add the following line:

```
11981 | @ |Composite Ref (CZ)   |@@@@ Comp Ref 1/4km    | 0 |
```

B.) Also, make sure that the rest of the Build 5.0 products buttons are present in this file. If you copied this file from /data/fxa/nationalData/ then you may skip this part.

```
11970 | @ |1km Composite Ref (CZ) |@@@@ 1km Comp Ref   | 0 |
11980 | @ |4km Composite Ref (CZ) |@@@@ 4km Comp Ref   | 0 |
10526 | @ |1km Comp Refl Cntr (CZC) |@@@@ 1km Comp Refl Gph | 0 |
10527 | @ |4km Comp Refl Cntr (CZC) |@@@@ 4km Comp Refl Gph | 0 |
10970 | @ |Comb Att Table (1km CZ) |@@@@ Comb Att Table (1km CZ) | 0 |
10980 | @ |Comb Att Table (4km CZ) |@@@@ Comb Att Table (4km CZ) | 0 |
```

7.) MODIFYING XXX-radarDataMenus.template

This file contains the layout of your kxxx radar menu(s). Each entry contains a productButton key (from Part 6), and a comment (after the #) of what that product is.

A.) The only change that you should have to make is to change the first product from:

productButton: 10705 # @@@@ Comp Ref

To:

productButton: 11981 # Comp Ref 1/4km with Attribute Tables

At SGF, we also took this opportunity to remove menu items of products that our office doesn't generate or use. For example, we removed the 3-bit products, the echo tops contour, the combined shear, and cell trends. If you DO decide to remove items, be sure to write down the productButton key incase they need to be re-added at a later date.

B.) Make sure all the Build 5.0 products are present as well. Again, if you copied this file from /data/fxa/nationalData, you may skip this part. A few offices may have changed their menu layout in previous builds.

Typically under the Derived, and then ** OTHER ** sub-menu, make sure the following items are present:

productButton: 11970 # 1km Comp Ref
productButton: 11980 # 4km Comp Ref

Typically under the Graphics submenu, also make sure the following are present:

productButton: 10526 # 1km Comp Refl Gph
productButton: 10527 # 4km Comp Refl Gph
productButton: 10970 # 1km CZ Cat
productButton: 10980 # 4km CZ Cat

8.) Now you will need to run localization. Again, XXX refers to your site ID.

A.) First, copy files edited in step 4-7 to all the workstations:

As user fxa in /awips/fxa/data/localization/XXX/ , type the following for each workstation

rcp -p XXX-radar* ws1:/awips/fxa/data/localization/XXX/.
(Same for ws2 through ws5)

B.) On each workstation perform the following:

cd /awips/fxa/data/localization/scripts
./mainScript.csh f -radar
(the 'f' forces the files in /awips/fxa/data/localizationDataSets/XXX to be recreated)
Restart the D2D.

9.) The last thing you will need to do is tell the AWIPS notification server about any changes you made, so that the "green" or black times will update correctly in your menus.

A.) In a telnet window, as user fxa on any workstation, type:

cd /awips/fxa/data/localizationDataSets/XXX/

B.) Next, you need to copy the files that were generated during localization to the application servers (AS1/AS2).

rcp -p radar* as1:/awips/fxa/data/localizationDataSets/XXX/.
rcp -p radar* as2:/awips/fxa/data/localizationDataSets/XXX/.

C.) Lastly, login to as1, and stop/start the notification server. At a telnet prompt, type the following:

rlogin as1 (wait for prompt)
stopNotificationServer (hit return and wait for the prompt to return, then type:)
startNotificationServer &

10.) You're Done! Since the notification server is dynamic, you do not have to restart the D2Ds again. "Green" times should begin to appear with the next volume scan.

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